

**Building Renewal Grant Application**

**Initial Submission Date:** 6/10/2013 12:12:56 PM

**Application ID:** 603

**Resubmittal Date:**

Please provide as much of the requested information as possible. SFB staff will assist in developing required information that is not currently available.

**District Name:** Tolleson Elementary District

**Superintendent:** Dr. Lupita Hightower

**Contact Person:** James Serbin

**Contact Phone Number:** 623-533-3930

**Contact Email:** jserbin@tesd.k12.az.us

**School Site:** Desert Oasis

**Buildings:** 9999 School Wide

**Description of Problem**

Please include a detailed description of the issues, as well as a description of and a copy of any professional studies, citations or reports from government entities, recommended solutions, and any cost information or estimates. If additional space is needed, please attach.

## Building Renewal Grant Application

The control system at Desert Oasis is designed to run on Niagara platform (central computer) with York controllers.

### Issues:

- 1)The Niagara software is a demo version and is not licensed to the district. The demo version expires June 2014.
- 2)An investigation was performed, verifying communication between sensors & controllers and controllers & routers. 23 units out of total of 64 units are inaccessible from the central computer (front-end) at the district, and cannot be controlled (change set-points, change schedule etc.) by the district personnel.
- 3)The hard-wired connections between controller and router are disrupted. The wires are spliced and some wires are completely disconnected.
- 4)The financial impact of the disrupted communication is at least \$13K per year. The loss is due to current control system's inability to manage schedule or change set-points to mitigate demand charge and/or reduce KWH consumption.

### Solution:

- 1)The district has two options to fix the control system.
  - a.Replace the non-communication controllers and sensors with new controllers and sensors, with new Niagara software to integrate the controllers.
  - b.Replace all the controllers with BacNet Thermostats and integrate thermostats with JACE 600, which becomes the district's front-end.

### Cost:

- 1)The estimated cost to replace non-communicating controllers (23) with new Niagara front-end with integration and programming is \$63,000 with breakdown as below:
  - a.Controller - \$23,000
  - b.Niagara Software - \$10,000
  - c.Labor (Installation)- \$15,000
  - d.Integration & Programming- \$15,000
- 2)The estimated cost to replace all controllers (64) with new JACE 600 is \$53,500 with breakdown as below:
  - a.BacNet Thermostat -\$19,500
  - b.JACE 600 - \$4,000
  - c.Labor ( Installation) - \$15,000
  - d.Integration & Programming - \$15,000

### Recommendation:

BESP,LLC recommends district replace all controllers with BacNet Thermostat with JACE 600 for the following reasons:

- a.Cost-effective
- b.Easy to maintain
- c.Cheaper to replace
- d.BacNet Compatible
- e.JACE 600 can be integrated with controller if district decides to use controllers with future units.

The estimated Cost is \$53,500.00

**Project Category:** HVAC

## Building Renewal Grant Application

Are any of the above-described issues in buildings or part of buildings that are leased to another entity, including a district sponsored charter school?

### Available Funding

Current unencumbered building renewal fund balance (Fund 690):	\$0.00
Amount of Local funds planned for this project	\$0.00

Please outline any associated insurance coverage.

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**Liaison:** Breuer

gbreuer@azsfb.gov

602-542-6139

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Superintendent Printed Name

\_\_\_\_\_  
Superintendent Signature

\_\_\_\_\_  
Date